

IoT Based Data Processing for Automated Industrial Meter Reader using Raspberry Pi

Abstract:

With the increasing importance of information processing in industries arises the need for efficient data logging systems that are compatible with existing measuring devices such as LCD and LED meters. This paper presents the framework for an Internet of Things (IoT) device as an automated industrial meter reader that uploads the collected numeral data to a cloud storage for centralized data processing. The implementation of the device is done using Raspberry Pi as the platform. The device follows a four-step process- Image Acquisition using Raspberry Pi camera module, Optical Character Recognition using feature extraction technique, Internet Upload Mechanism using Google forms and Online Data Processing using Google Spreadsheet. The performance of the device and techniques for debugging are also discussed.